

AMENDMENT TO THE CLAIMS

1. (Original) A method of establishing adjacencies on a network, the method comprising, at a first node of the network,  
sending hello packets on the network;  
receiving hello packets from other nodes on the network on the basis of the received hello packets;  
sending a link-state packet without adjacency information and without an overload bit set;  
interrogating a link-state adjacency table and, when only one adjacency is listed in the link-state table, sending a further link-state packet with the adjacency information and the overload bit set; and  
on convergence of a forward cache, sending a further link-state packet with adjacency information and without the overload bit set.
2. (Original) A method according to claim 1 wherein the method is initiated when the first node is in a restart node.
3. (Original) A method according to claim 2 wherein the restart node is a line card restart, a router restart or a download of a forwarding information base.
4. (Original) A method according to claim 1 wherein the network uses Intermediate System-to-Intermediate System protocol and wherein the adjacency information is advertised in a Type Length Variable field of the link-state packet.
5. (Original) A method of re-establishing adjacency in an inter-networked system, the method comprising:
  - i) determining that adjacency establishment is required;
  - ii) transmitting a message to discover neighboring network elements;
  - iii) receiving messages from neighboring network elements; and
  - iv) in response to the received messages, generating a link-state packet;
  - v) sending the link-state packet without adjacency information and without an overload bit set;

- vi) interrogating a link-state adjacency table and, when only one adjacency is listed in the link-state table, sending a further link-state packet with the adjacency information and the overload bit set; and
  - vii) on convergence of a forward cache, sending a further link-state packet with adjacency information and without the overload bit set.
6. (Currently Amended) A computer-readable storage medium carrying one or more sequences of instructions for establishing adjacency in a network, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:
- sending hello packets on the network;
- receiving hello packets from other nodes on the network on the basis of the received hello packets;
- sending a link-state packet without adjacency information and without an overload bit set;
- interrogating a link-state adjacency table and, when only one adjacency is listed in the link-state table, sending a further link-state packet with the adjacency information and the overload bit set; and
- on convergence of a forward cache, sending a further link-state packet with adjacency information and without the overload bit set.
7. (Currently Amended) A computer-readable storage medium as claimed in claim 6 further comprising instructions which, when executed by the one or more processors, cause the one or more processors to carry out the steps of:
- initiating the method when in a restart node.
8. (Currently Amended) A computer-readable storage medium as claimed in claim 6 further comprising instructions which, when executed by the one or more processors, cause the one or more processors to carry out the steps of:
- initiating the method when in a restart mode comprising one or more of the following: a line card restart, a router restart or a download of a forwarding information base.

9. (Currently Amended) A computer-readable storage medium according to claim 6 wherein the network uses Intermediate System-to-Intermediate System protocol and wherein the adjacency information is advertised in a Type Length Variable field of the link-state packet.
10. (Currently Amended) A computer-readable storage medium carrying one or more sequences of instructions for establishing adjacency in a network, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:
- i) determining that adjacency establishment is required;
  - ii) transmitting a message to discover neighboring network elements;
  - iii) receiving messages from neighboring network elements; and
  - iv) in response to the received messages, generating a link-state packet;
  - v) sending the link-state packet without adjacency information and without an overload bit set;
  - vi) interrogating a link-state adjacency table and, when only one adjacency is listed in the link-state table, sending a further link-state packet with the adjacency information and the overload bit set; and
  - vii) on convergence of a forward cache, sending a further link-state packet with adjacency information and without the overload bit set.
11. (Original) Apparatus for establishing adjacencies on a network, the apparatus comprising:
- means for sending hello packets on the network;
  - means for receiving hello packets from other nodes on the network on the basis of the received hello packets;
  - means for sending a link-state packet without adjacency information and without an overload bit set;
  - means for interrogating a link-state adjacency table and, when only one adjacency is listed in the link-state table, sending a further link-state packet with the adjacency information and the overload bit set; and
  - on convergence of a forward cache, means for sending a further link-state packet with adjacency information and without the overload bit set.

12. (Original) Apparatus for re-establishing adjacency in an inter-networked system, the apparatus comprising:
- i) means for determining that adjacency establishment is required;
  - ii) means for transmitting a message to discover neighboring network elements;
  - iii) means for receiving messages from neighboring network elements; and
  - iv) means for in response to the received messages, generating a link-state packet;
  - v) means for sending the link-state packet without adjacency information and without an overload bit set;
  - vi) means for interrogating a link-state adjacency table and, when only one adjacency is listed in the link-state table, sending a further link-state packet with the adjacency information and the overload bit set; and
  - vii) on convergence of a forward cache, means for sending a further link-state packet with adjacency information and without the overload bit set.
13. (Original) An apparatus for establishing adjacencies on a network, the apparatus comprising:
- a network interface that is coupled to the network for receiving one or more packet flows therefrom;
- a processor;
- one or more stored sequences of instructions which, when executed by the processor, cause the processor to carry out the steps of:
- sending hello packets on the network;
- receiving hello packets from other nodes on the network on the basis of the received hello packets;
- sending a link-state packet without adjacency information and without an overload bit set;
- interrogating a link-state adjacency table and, when only one adjacency is listed in the link-state table, sending a further link-state packet with the adjacency information and the overload bit set; and
- on convergence of a forward cache, sending a further link-state packet with adjacency information and without the overload bit set.

14. (Original) An apparatus for establishing adjacencies on a network, the apparatus comprising:
- a network interface that is coupled to the network for receiving one or more packet flows therefrom;
- a processor;
- one or more stored sequences of instructions which, when executed by the processor, cause the processor to carry out the steps of:
- i) determining that adjacency establishment is required;
  - ii) transmitting a message to discover neighboring network elements;
  - iii) receiving messages from neighboring network elements; and
  - iv) in response to the received messages, generating a link-state packet;
  - v) sending the link-state packet without adjacency information and without an overload bit set;
  - vi) interrogating a link-state adjacency table and, when only one adjacency is listed in the link-state table, sending a further link-state packet with the adjacency information and the overload bit set; and
  - vii) on convergence of a forward cache, sending a further link-state packet with adjacency information and without the overload bit set.